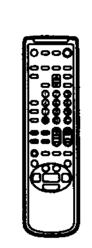
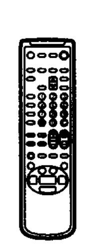
SERVICE MANUAL

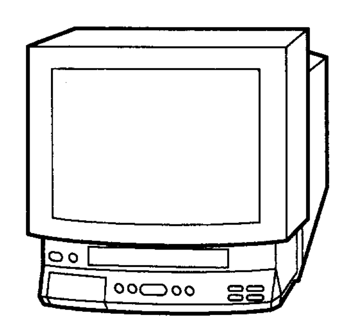
BC-4 CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-14V5A	RM-C810	Italian	SCC-N40D-A
KV-14V5B	RM-C812	French	SCC-N42D-A
KV-14V5D	RM-C810	AEP	SCC-N39D-A
KV-14V5E	RM-C810	Spanish	SCC-N41D-A
KV-14V5K	RM-C813	OIRT	SCC-N32C-A
KV-14V5U	RM-C811	UK	SCC-N43D-A
KV-14V6A	RM-C810	Italian	SCC-N40B-A
KV-14V6B	RM-C812	French	SCC-N42B-A
KV-14V6D	RM-C810	AEP	SCC-N39B-A
KV-14V6E	RM-C810	Spanish	SCC-N41B-A
KV-14V6U	RM-C811	UK	SCC-N43B-A

Refer to the SERVICE MANUAL of VHS MECHANICAL ADJUSTMENT IV for MECHANICAL ADJUSTMENT. (Part No. 9-973-623-11)


RM-C813


RM-C810
RM-C811
RM-C812







※ **Please file according to model size. ....** ■

14

SPECIFICATIONS

TV Section

Television system B/G,L

Color system PAL,SECAM

NTSC3.58/NTSC4.43(VIDEO input only)

Channel coverage See "Receivable channels and channels display" balow.

Picture tube Black Trinitron

Aerial in 75-ohm aerial socket for VHF/UHF

Video Section

Format VHS standard

Video recording system

Rotary 2-head helical scanning system

Audio recording system

Monaural

Video signal PAL/SECAM

Tape speed PAL/SECAM

SP : 23.39mm/sec.

LP : 11.70mm/sec. (PAL only)

NTSC

SP : 33.35mm/sec.

LP : 11.12mm/sec.

Maximum recording time

SP : 4 hours with E-240

LP : 8 hours with E-240

Inputs and Outputs

Inputs LINE IN VIDEO:phono jack (1)

1 Vp-p, 75 ohms, unbalanced, sync negative

LINE IN AUDIO:phono jack (1)

Input level:500 mVrms (100% modulation)

EURO-AV : 21-pin

Output EURO-AV : 21-pin

Head Hone Jack Monaural minijack

General

Clock Quartz locked

Clock back up Approx. 7days

Power requirements

220-240 V AC, 50Hz

Power consumption

KV-14V5A,B,D,E,K : 67W

KV-14V6A,B,D,E : 73W

KV-14V5U : 71W

KV-14V6U : 77W

Operating temperature

5°C to 40°C(41F° to 104°F)

Storage temperature

-20°C to 60°C(-4°F to 140°F)

Dimensions 397 x 409 x 426 mm (w/h/d)

($15^3/_4$ x 16 $^1/_8$ x 16 $^7/_8$ inches)

Mass 14kg (30 Ib 14 oz.)

Accessories supplied

Remote Control (1)

R6 (size AA) batteries (2)

Aerial (1)


Design and specifications are subject to change without notice.

Note

This appliance conforms with the EU Directive 89/336/EE3 regarding interference suppression.

Receivable channels and channel displays

TV System Band	B/G	L(B)	I(U)	D/K(K)
Low VHF band	E2–E4	F2–F4	–	R1–R5
Hight VHF band	E5–E12	F5–F10	–	R6–R12
UHF	E21–E69	F21–F69	B21–B69	R21–R69
CATV	S01–S05	B–Q	–	S01–S05
	S1–S41	S21–S44	–	S1–S41



A BOARD ∗ MARK LIST

	KV-14V5A/14V5D/14V5E	KV-14V5B	KV-14V5K	KV-14V5U	KV-14V6A/14V6D/14V6E	KV-14V6B	KV-14V6U
C107	–	–	–	–	0.01 B : CHIP	0.01 B : CHIP	0.01 B : CHIP
C108	–	–	–	–	10	10	10
C109	–	–	–	–	0.01 B : CHIP	0.01 B : CHIP	0.01 B : CHIP
C110	–	–	–	–	47 25V	47 25V	47 25V
C111	–	–	–	–	0.1 25V B : CHIP	0.1 25V B : CHIP	0.1 25V B : CHIP
C112	–	–	–	–	47 25V	47 25V	47 25V
C122	–	1 16V F : CHIP	1 16V F : CHIP	–	–	1 16V F : CHIP	–
C123	–	1 16V F : CHIP	1 16V F : CHIP	–	–	1 16V F : CHIP	–
C124	–	–	–	–	0.1 25V B : CHIP	0.1 25V B : CHIP	0.1 25V B : CHIP
C125	–	–	–	–	10	10	10
C126	–	–	–	–	2.2 16V F : CHIP	2.2 16V F : CHIP	2.2 16V F : CHIP
C127	–	–	–	–	2.2 16V F : CHIP	2.2 16V F : CHIP	2.2 16V F : CHIP
C128	–	–	–	–	47 25V	47 25V	47 25V
C129	–	–	–	–	0.01 B : CHIP	0.01 B : CHIP	0.01 B : CHIP
C130	–	–	–	–	1 16V F : CHIP	–	–
C131	–	–	–	–	1 16V F : CHIP	–	–
C133	–	–	–	–	0.1 25V B : CHIP	0.1 25V B : CHIP	0.1 25V B : CHIP
C136	–	–	–	–	0.047 25V B : CHIP	0.047 25V B : CHIP	0.047 25V B : CHIP
C137	–	–	–	–	270p CH : CHIP	270p CH : CHIP	270p CH : CHIP
C140	–	–	–	–	100p CH : CHIP	100p CH : CHIP	100p CH : CHIP
C141	–	–	–	–	0.0047 B : CHIP	0.0047 B : CHIP	0.0047 B : CHIP
C142	–	–	0.01 B : CHIP	–	–	–	–
C302	2.2 16V F : CHIP	2.2 16V F : CHIP	–	2.2 16V F : CHIP	2.2 16V F : CHIP	2.2 16V F : CHIP	2.2 16V F : CHIP
C601	–	–	–	–	10	10	10
CF101	5.5MHz	5.5MHz	5.5MHz	6.0MHz	5.5MHz	5.5MHz	6.0MHz
CF102	–	–	–	–	5.5MHz	5.5MHz	6.0MHz
CF103	–	–	6.5MHz	–	–	–	–
CP101	147395311	147395311	147395311	147395311	125137211	125137211	125137211
IC102	–	–	–	–	μ2860B-BFP G3	μ2860B-BFP G3	μ2860B-BFP G3
IC103	–	NJM2521M	NJM2521M	–	–	NJM2521M	–
IC104	–	–	–	–	–	NJM2521M	–
IC611	–	–	–	–	PQ09RE11	PQ09RE11	PQ09RE11
L101	–	–	–	–	4.7μH 5% : EL0606	4.7μH 5% : EL0606	4.7μH 5% : EL0606
L103	–	–	–	–	4.7μH 5% : EL0606	4.7μH 5% : EL0606	4.7μH 5% : EL0606
Q102	–	–	–	–	2SA1037K	2SA1037K	2SA1037K
Q105	–	–	–	–	2SC2412K	2SC2412K	2SC2412K
Q106	–	–	–	–	2SA1037K	2SA1037K	2SA1037K
R102	–	–	–	–	10k : CHIP	10k : CHIP	10k : CHIP
R106	–	–	–	–	100 : CHIP	100 : CHIP	100 : CHIP
R107	–	–	–	–	100 : CHIP	100 : CHIP	100 : CHIP
R108	–	–	–	–	100 : CHIP	100 : CHIP	100 : CHIP
R109	–	–	–	–	10k : CHIP	10k : CHIP	10k : CHIP
R112	–	–	–	–	470 : CHIP	470 : CHIP	470 : CHIP
R113	–	–	–	–	27k : CHIP	27k : CHIP	27k : CHIP
R115	–	–	–	–	4.7k : CHIP	4.7k : CHIP	4.7k : CHIP
R118	–	100 : CHIP	100 : CHIP	–	–	100 : CHIP	–
R119	–	–	–	–	–	100 : CHIP	–
R124	–	–	–	–	22k : CHIP	22k : CHIP	22k : CHIP
R125	–	–	–	–	470 : CHIP	470 : CHIP	470 : CHIP
R126	–	–	–	–	220k : CHIP	220k : CHIP	220k : CHIP
R127	–	–	–	–	10k : CHIP	10k : CHIP	10k : CHIP
R130	–	–	–	–	10k : CHIP	10k : CHIP	10k : CHIP
R131	–	–	–	–	15k : CHIP	15k : CHIP	15k : CHIP
R133	0 : CHIP	–	–	0 : CHIP	–	–	0 : CHIP
R134	–	–	–	–	–	–	0 : CHIP
R139	–	–	–	–	6.8k : CHIP	6.8k : CHIP	6.8k : CHIP
R140	–	–	–	–	470 : CHIP	470 : CHIP	470 : CHIP
R141	–	–	–	–	12k : CHIP	12k : CHIP	12k : CHIP
R142	–	–	–	–	220 : CHIP	220 : CHIP	220 : CHIP
R144	–	–	100 : CHIP	–	–	–	–
R145	–	–	4.7k : CHIP	–	–	–	–
R146	–	–	–	–	100 : CHIP	100 : CHIP	100 : CHIP
R149	–	–	–	–	–	0 : CHIP	–
R150	–	0 : CHIP	–	–	–	0 : CHIP	–
R151	–	–	–	–	0 : CHIP	0 : CHIP	0 : CHIP
R153	10k : CHIP	10k : CHIP	10k : CHIP	10k : CHIP	–	–	–
R154	0 : CHIP	0 : CHIP	0 : CHIP	0 : CHIP	–	–	–
R155	0 : CHIP	0 : CHIP	0 : CHIP	–	–	–	–
R156	0 : CHIP	0 : CHIP	0 : CHIP	0 : CHIP	–	–	–
R157	–	–	–	–	0 : CHIP	0 : CHIP	0 : CHIP
R158	0 : CHIP	0 : CHIP	0 : CHIP	0 : CHIP	–	–	–
R159	–	–	–	–	22k : CHIP	22k : CHIP	22k : CHIP
R417	1k : CHIP	1k : CHIP	1k : CHIP	1k : CHIP	–	–	–
R636	–	–	–	–	220 : CHIP	220 : CHIP	220 : CHIP
R637	–	–	–	–	22 1W : RS	22 1W : RS	22 1W : RS
TU101	TVF-01AEP	TVF-01FR	TVF-01AEP	TVF-01UK	TVF-01AEPP	TVF-01FRP	TVF-01UKP
TU102	–	–	–	–	TVF-01AEPP	TVF-01FRP	TVF-01UKP

– : Not mounted

A BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q101	8.5	2.2	8.9
Q102	8.5	2.1	8.9
Q103	1.7	4.3	1.1
Q104	4.3	2.9	4.9
Q105	1.7	4.3	1.1
Q106	4.2	2.8	4.9
Q201	0.7	0	GND
Q301	4.6	GND	5.3
Q302	0	8.9	0
Q401	3.8	GND	4.4
Q402	3.9	6.4	3.3
Q403	3.7	8.9	5.8
Q404	1.1	GND	1.8
Q405	6.4	8.9	5.8
Q406	0	GND	0
Q407	0	GND	0
Q408	0.6	GND	0
Q601	0.6	3.4	GND
Q602	116.7	116.9	117.3
Q603	0.7	0.1	GND
Q802	-0.2	117.9	GND

All voltages are in V.

A BOARD IC VOLTAGE LIST

IC101	1	1.9	IC302	5	0.7	IC304	40	4.1	IC601	5	GND
	4	GND		8	GND		41	2.3	IC602	C	10.2
	6	2.1		9	5.1		42	GND		O	11.53
	7	1.6		10	GND		43	1.7		G	GND
	8	2.0		11	3.0		44	8.8	IC603	1	12.4
	9	2.0		12	3.0		45	2.5		2	8.9
	10	1.8		14	1.5		46	4.0		3	GND
	11	4.3		16	1.4		47	3.1	IC604	1	13.5
	12	0	IC303	1	1.5		48	4.5		2	12.0
	13	4.9		5	8.2		50	4.7		3	GND
	14	1.8		6	GND		51	4.7		4	3.5
IC102	1	1.8		9	3.5		52	4.1	IC605	1	13.5
	4	GND		10	4.3		53	4.0		2	12.0
	6	2.1		11	5.7		54	5.0		3	GND
	7	1.6		12	2.9		55	3.6		4	3.5
	8	2.0		19	0.7		56	3.6	IC606	I	12.1
	9	2.0		20	1.5		59	8.8		O	8.9
	10	1.8	IC304	1	4.8		60	5.5		G	GND
	11	4.3		2	GND		61	2.4	IC607	1	6.4
	12	0		3	5.6		62	7.1		2	5.3
	13	4.9		4	5.6		63	GND		3	GND
	14	1.8		5	3.8	IC401	1	3.8		4	3.5
IC103	1	3.1		6	5.0		2	3.8	IC608	1	6.4
	2	0.1		7	5.4		7	3.8		2	5.6
	3	3.3		8	5.4		8	3.8		3	GND
	4	GND		9	GND		13	4.6		4	2.9
	6	4.9		10	0.7		14	4.6	IC609	1	6.4
	7	2.4		11	0		15	0		2	5.6
	8	GND		12	5.5		17	3.6		3	2.7
IC104	1	3.3		13	5.4		18	3.8	IC610	I	-13.7
	2	4.5		14	5.4		22	3.8		G	GND
	3	3.1		15	0.1		23	3.7		O	-19.0
	4	GND		16	0.1		25	3.8	IC611	1	10.5
	6	4.9		17	5.4		27	3.8		2	9.0
	7	2.4		18	5.4		30	0		3	GND
	8	GND		19	5.4		33	3.8		4	3.5
IC105	1	4.9		20	8.8		34	3.7	IC802	1	1.2
	2	4.9		21	5.2		36	3.8		2	3.3
	3	4.3		22	1.1		38	8.9		3	2.0
	4	32.1		23	5.1		41	3.8		4	GND
	5	GND		24	1.2		42	0		5	3.1
IC201	2	0		25	4.9		43	3.8		6	1.4
	3	3.4		26	1.2		44	3.8		7	8.3
	5	8.4		27	4.9	IC501	1	GND		8	9.0
	7	8.5		28	1.3		2	0.1			
	8	GND		29	7.2		3	12.3	PH601	1	11.2
	9	0.3		31	2.9		4	1.2		2	10.2
	10	0		33	3.6		5	1.4		3	4.1
	13	16.8		34	4.2		6	24.3		4	19.0
	14	8.6		35	4.6		7	1.3	PH602	1	6.3
	15	0		36	4.6	IC601	1	1.7		2	5.2
IC302	1	5.1		37	3.3		2	0.1		3	-13.7
	3	GND		38	3.4		3	0.3		4	-5.7
	4	GND		39	5.8		4	18.6			

All voltages are in V.
Pin numbers which are not described are not used.

Schematic diagrams
← A board

Schematic diagrams
C1 FF7 SE SW board →

SW (POWER)

SE (SECAM PROCESS)
(KV-14V5B/14V6B ONLY)

SE BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q1801	1.9	2.5	2.5
Q1802	0	4.8	4.9
Q1804	4.0	4.8	3.8
Q1805	0.6	2.4	2.4
Q1806	3.7	4.9	3.0
Q1807	0.3	4.3	GND
Q1808	4.2	0	GND
Q1809	(0.3) <0>	0.0	GND
Q1810	0.3	(0.3) <0>	GND
Q1811	(0) <4.9>	(0.3) <0>	GND

All voltages are in V.

SE BOARD IC VOLTAGE LIST

IC1801	1	4.3
	2	1.9
	3	3.9
	4	0.4
	5	0.1
	6	0.1
	7	GND
	8	2.4
	9	2.4
	10	2.2
	11	2.4
	12	4.3
	13	2.4
	14	3.0
	15	2.7
	16	0.6
	17	2.5
	18	2.1
	19	2.3
	20	2.5
	21	2.5
	22	4.9
	23	2.9
	24	3.0
	25	4.3
	26	4.8
	27	0.5
	28	0.3
IC1802	2	GND
	3	GND
	4	GND
	5	4.0
	6	0
	7	0
	8	4.8

All voltages are in V.
Pin numbers which are not described are not used.

C1 (R, G, B OUT)

FF7 (LED, FUNCTION KEY)

• C1 BOARD WAVEFORMS

① PAL/SECAM — 2.3Vp-p (H)
① NTSC — 2.5Vp-p (H)
② PAL/SECAM — 2.0Vp-p (H)
② NTSC — 2.5Vp-p (H)
③ PAL/SECAM — 2.0Vp-p (H)
③ NTSC — 2.5Vp-p (H)
④ PAL/SECAM — 68.0Vp-p (H)
④ NTSC — 68.0Vp-p (H)
⑤ PAL/SECAM — 64.0Vp-p (H)
⑤ NTSC — 64.0Vp-p (H)
⑥ PAL/SECAM — 64.0Vp-p (H)
⑥ NTSC — 64.0Vp-p (H)
⑦ — 64.0Vp-p (H)

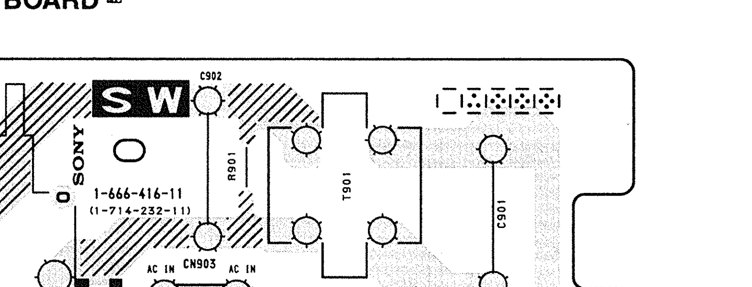
C1 BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q701	147.5	3.4	150.9
Q702	152.6	3.4	155.6
Q703	154.2	3.4	156.7
Q704	1.1	154.2	0.7
Q705	1.1	152.6	0.7
Q706	1.1	147.5	0.7
Q707	3.4	0.2	3.6

All voltages are in V.

SW [POWER]

– SW BOARD –

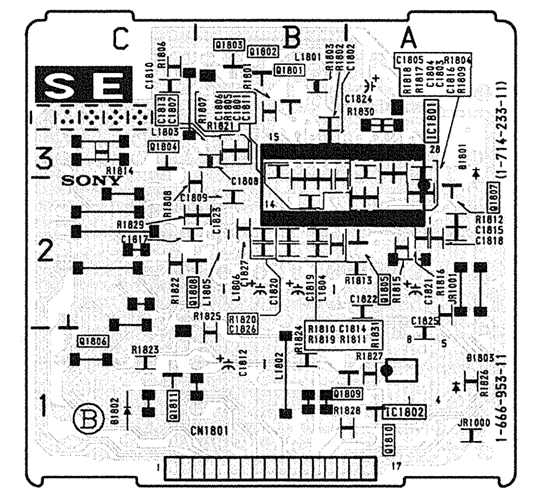


FF7 [LED, FUNCTION KEY]

– FF7 BOARD –

SE [SECAM PROCESS (KV-14V5B/V6B ONLY)]

– SE BOARD –

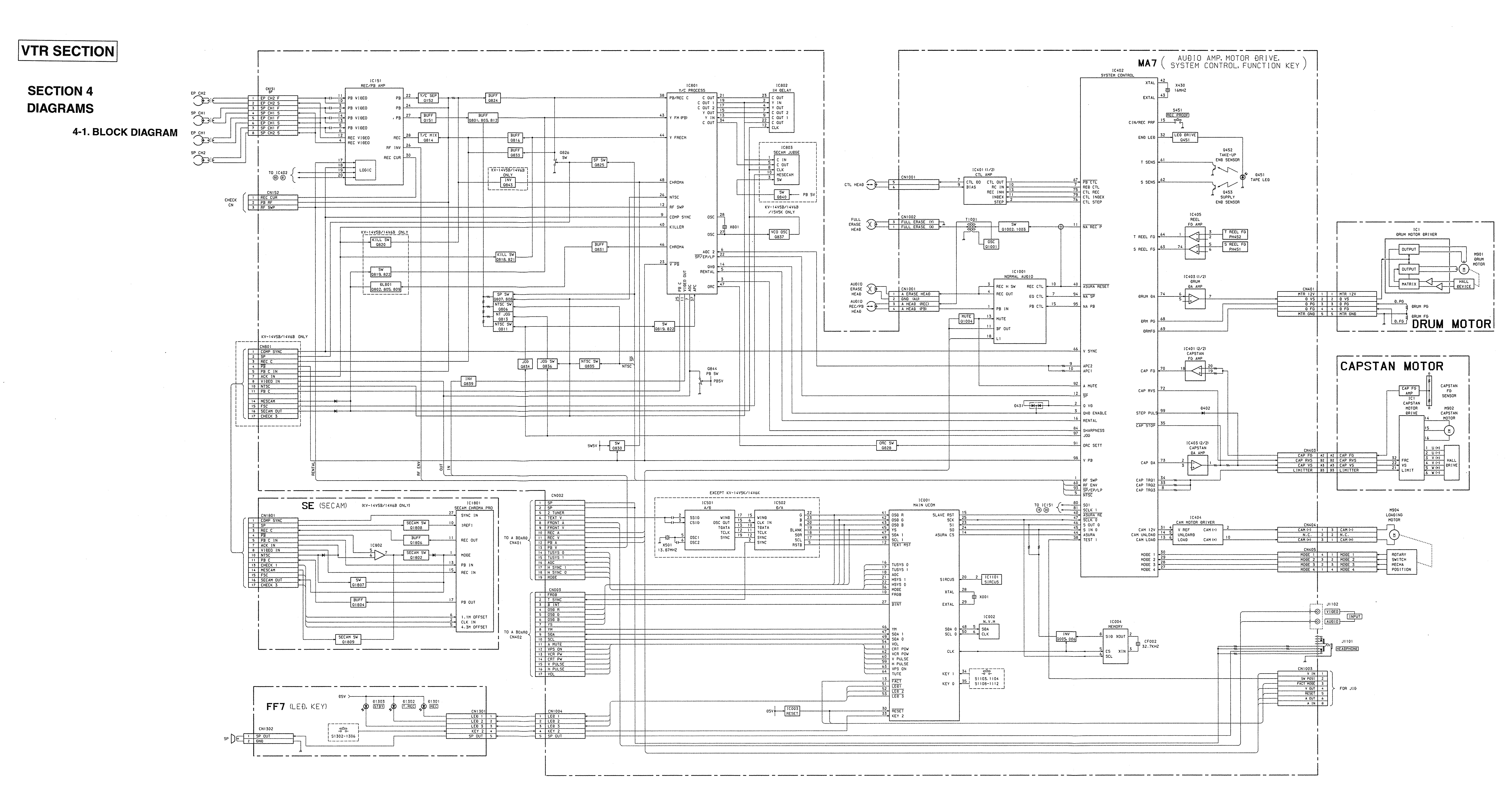


C1 [RGB OUT]

– C1 BOARD –

SECTION 4
DIAGRAMS

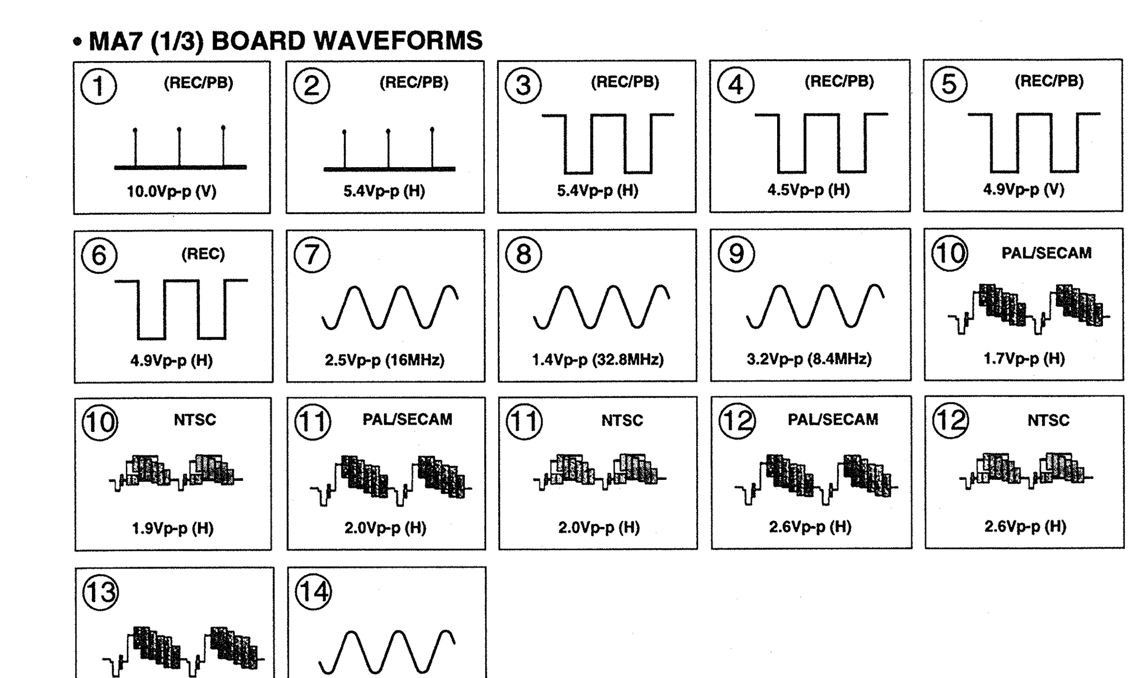
4-1. BLOCK DIAGRAM

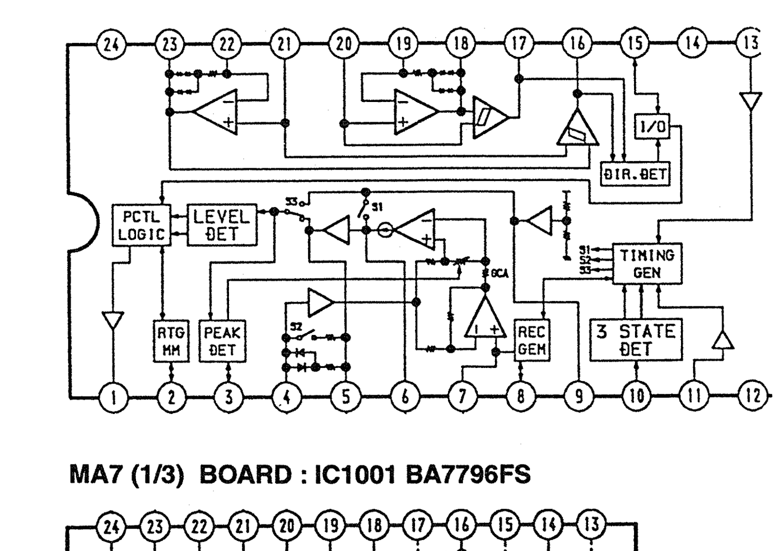


MA7 (1/3)

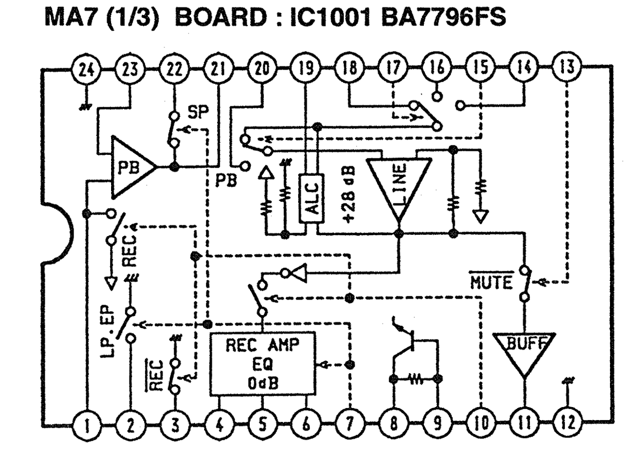
(AUDIO AMP, MOTOR DRIVE, SYSTEM CONTROL, FUNCTION KEY)

MA7 (1/3) BOARD WAVEFORMS





MA7 (1/3) BOARD : IC1001 BA7796FS

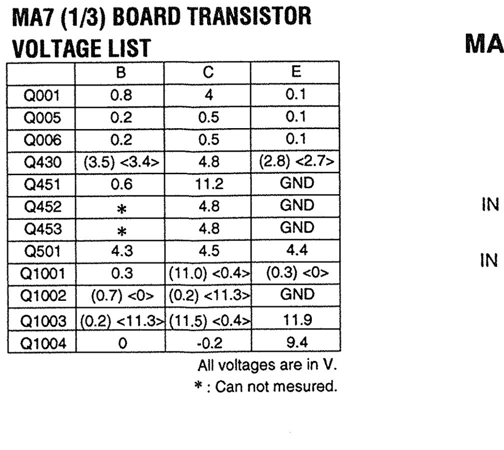


MA7 (1/3) BOARD IC VOLTAGE LIST

IC001	2	0.2	IC005	5	4.7	IC402	57	4.8	IC501	15	2.4
	4	4.9		6	GND		58	4.8		16	4.9
	5	4.9		9	4.8		59	GND		17	0.3
	6	4.9		11	0		60	(0.4) <1.7>		18	GND
	7	4.9		12	4.7		61	4.8		19	4.5
	8	4.9		14	4.6		62	4.8	IC502	1	4.9
	9	4.9		15	4.7		63	*		2	3.5
	10	0		16	1.4		64	*		4	4.9
	11	1.1		17	0.9		66	0.6		5	4.8
	12	4.9		19	4.8		67	(4.8) <3.1>		6	2.4
	13	4.9		20	4.8		68	0.6		7	GND
	14	4.4	IC401	1	2.6		69	2.6		8	GND
	15	4.8		2	0.2		70	2.3		9	4.9
	16	4.8		3	(1.3) <1.7>		72	0.2		10	0
	17	4.8		4	1.0		73	2.5		11	0
	18	4.8		5	1.0		74	2.5		12	4.5
	20	4.8		6	1.0		75	(4.8) <0>		14	GND
	21	0.3		7	(2.6) <2.5>		76	0		15	0.3
	22	0.3		8	(2.8) <2.5>		79	0		16	4.9
	23	0.1		9	2.5		80	4.5		17	4.8
	24	0.1		10	(2.8) <2.5>		81	4.7		18	4.4
	25	1.3		11	0.2		84	(3.3) <4.0>		19	0
	26	GND		12	GND		88	GND		20	0
	27	(0.6) <4.8>		13	4.8		89	4.8		21	4.9
	28	2.4		14	2.3		90	4.8		22	0.1
	29	2.2		15	GND		91	0		23	0
	30	4.8		18	2.1		92	0.2		24	GND
	32	4.8		19	2.4		93	0.2		25	1.4
	33	4.8		20	2.4		94	(0.2) <4.8>		26	1.4
	34	4.8		24	4.8		95	(0.2) <4.8>	IC902	1	5.2
	35	4.8	IC402	1	2.2		97	4.8		2	0.9
	36	(3.3) <2.3>		2	0.2		98	(4.8) <0.1>		3	0.6
	37	4.8		3	0.2		99	0.2		4	GND
	38	4.8		5	4.8	IC403	1	2.8		5	0.2
	39	2.8		7	(3.3) <2.7>		2	2.5		6	1.1
	40	2.8		8	1.7		3	2.5		7	0.5
	41	0		9	0.2		4	GND		8	5.2
	42	0		10	4.8		5	2.5	IC1001	1	2.1
	43	0		11	(4.8) <0.3>		6	2.5		2	0
	45	0.2		12	0.2		7	2.5		3	0
	46	0		13	0.2		8	11.8		4	5.7
	47	4.7		14	0.2	IC404	1	GND		5	5.7
	48	4.7		15	4.8		2	0.7		6	5.6
	49	4.7		16	2.1		3	1.0		7	(4.8) <0.2>
	50	16:48		17	0.2		4	3.4		8	11.9
	51	0.6		18	4.8		5	0.2		9	11.7
	52	4.0		27	0.2		6	0.2		10	(0.3) <4.8>
	53	1.0		28	0.2		7	12.0		11	5.6
	54	0.5		29	4.8		8	12.0		12	GND
	55	GND		30	4.8		9	1.0		13	0.2
	56	4.8		31	0.2		10	0.7		15	(0.2) <5.4>
	57	4.8		32	0.6	IC405	1	Åñ		17	GND
	58	GND		33	1.5		2	1.8		18	5.6
	59	4.0		34	1.5		3	Åñ		19	0.2
	60	0.1		35	2.7		4	GND		20	5.6
	61	4.3		36	GND		5	*		21	2.2
	62	4.0		37	GND		6	1.8		22	2.2
	63	0.2		38	GND		7	*		23	2.2
	64	4.8		39	GND		8	4.8		24	0
IC002	1	GND		40	4.8	IC501	1	2.4	IC1101	1	4.9
	2	GND		41	GND		2	2.6		2	4.9
	3	GND		42	2.9		3	1.1		3	GND
	4	GND		43	2.2		4	0	PH451	1	1.3
	5	4.7		44	4.4		5	2.1		2	2.6
	6	4.7		45	2.6		6	3.1		3	Åñ
	7	GND		46	2.5		7	GND		4	GND
	8	4.8		47	2.8		8	1.54	PH452	1	1.3
IC003	I	4.8		51	GND		9	0		2	GND
	G	GND		52	GND		10	1.7		3	0
	O	4.8		53	4.8		11	GND		4	*
IC005	1	GND		54	4.8		12	0			
	2	GND		55	(2.4) <2.9>		13	0			
	4	4.7		56	GND		14	GND			

All voltages are in V.
*:Can not mesured.
Pin numbers which are not described are not used.

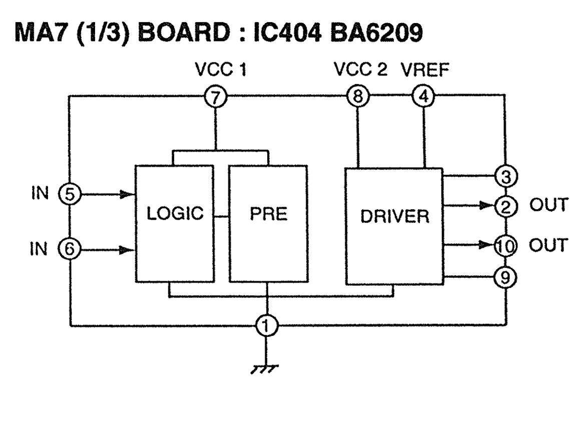
MA7 (1/3) BOARD TRANSISTOR VOLTAGE LIST



	B	C	E
Q001	0.8	4	0.1
Q005	0.2	0.5	0.1
Q006	0.2	0.5	0.1
Q430	(3.5) <3.4>	4.8	(2.8) <2.7>
Q451	0.6	11.2	GND
Q452	*	4.8	GND
Q453	*	4.8	GND
Q501	4.3	4.5	4.4
Q1001	0.3	(11.0) <0.4>	(0.3) <0>
Q1002	(0.7) <0>	(0.2) <11.3>	GND
Q1003	(0.2) <11.3>	(11.5) <0.4>	11.9
Q1004	0	-0.2	9.4

All voltages are in V.
* : Can not mesured.

MA7 (1/3) BOARD : IC404 BA6209



MA7 (1/3) BOARD * MARK LIST

	KV-14V5A/14V5E/14V6A/14V6E	KV-14V5B/14V6B	KV-14V5D/14V6D	KV-14V5K	KV-14V5U/14V6U
C007	–	150p CH : CHIP	150p CH : CHIP	–	150p CH : CHIP
C008	–	0.047 25V B : CHIP	0.047 25V B : CHIP	–	0.047 25V B : CHIP
C009	–	0.033 25V B : CHIP	0.033 25V B : CHIP	–	0.033 25V B : CHIP
C010	–	0.033 25V B : CHIP	0.033 25V B : CHIP	–	0.033 25V B : CHIP
C016	–	0.0022 B : CHIP	0.0022 B : CHIP	–	0.0022 B : CHIP
C033	–	100 10V	100 10V	–	100 10V
C099	–	0.1 25V F : CHIP	0.1 25V F : CHIP	–	0.1 25V F : CHIP
C502	0.022 B : CHIP	0.022 B : CHIP	0.022 B : CHIP	–	0.022 B : CHIP
C503	0.022 B : CHIP	0.022 B : CHIP	0.022 B : CHIP	–	0.022 B : CHIP
C504	220p CH : CHIP	100p CH : CHIP	200p CH : CHIP	–	200p CH : CHIP
C505	15p CH : CHIP	15p CH : CHIP	15p CH : CHIP	–	15p CH : CHIP
C506	15p CH : CHIP	15p CH : CHIP	15p CH : CHIP	–	15p CH : CHIP
C507	100 10V	100 10V	100 10V	–	100 10V
C508	0.1 25V F : CHIP	0.1 25V F : CHIP	0.1 25V F : CHIP	–	0.1 25V F : CHIP
C509	220p CH : CHIP	220p CH : CHIP	220p CH : CHIP	–	220p CH : CHIP
C510	0.1 25V F : CHIP	0.1 25V F : CHIP	0.1 25V F : CHIP	–	0.1 25V F : CHIP
C512	0.1 25V F : CHIP	0.1 25V F : CHIP	0.1 25V F : CHIP	–	0.1 25V F : CHIP
C515	0.1 25V F : CHIP	0.1 25V F : CHIP	0.1 25V F : CHIP	–	0.1 25V F : CHIP
C516	0.01 B : CHIP	0.01 B : CHIP	0.01 B : CHIP	–	0.01 B : CHIP
C517	0.1 25V F : CHIP	0.1 25V F : CHIP	0.1 25V F : CHIP	–	0.1 25V F : CHIP
C518	100 10V	100 10V	100 10V	–	100 10V
C519	15p CH : CHIP	75p CH : CHIP	15p CH : CHIP	–	15p CH : CHIP
C527	100 10V	100 10V	100 10V	–	100 10V
D501	1SS119	1SS119	1SS119	–	1SS119
D502	!SS119	1SS119	1SS119	–	1SS119
IC005	–	SDA5649X	SDA5649X	–	SDA5649X
IC501	CF72416DW	CF72416DW	CF72416DW	–	CF72416DW
IC502	CF70204NW	CF70204NW	CF70204NW	–	CF70204NW
L003	–	10µH : EL0405	10µH : EL0405	–	10µH : EL0405
L501	10µH : EL0405	10µH : EL0405	10µH : EL0405	–	10µH : EL0405
L502	JW	JW	JW	–	JW
L503	10µH : EL0405	10µH : EL0405	10µH : EL0405	–	10µH : EL0405
Q501	2SC2712-YG	2SC2712-YG	2SC2712-YG	–	2SC2712-YG
R010	–	1k : CHIP	–	1k : CHIP	–
R059	–	1k : CHIP	–	1k : CHIP	–
R065	–	10k : CHIP	–	–	10k : CHIP
R066	–	10k : CHIP	–	10k : CHIP	–
R067	–	10k : CHIP	10k : CHIP	–	10k : CHIP
R068	10k : CHIP	–	10k : CHIP	10k : CHIP	–
R069	10k : CHIP	–	10k : CHIP	–	10k : CHIP
R070	10k : CHIP	–	–	10k : CHIP	–
R079	10k : CHIP	10k : CHIP	10k : CHIP	–	10k : CHIP
R081	10k : CHIP	10k : CHIP	10k : CHIP	–	10k : CHIP
R082	–	–	–	10k : CHIP	–
R083	–	6.8k : CHIP	6.8k : CHIP	–	6.8k : CHIP
R085	–	–	–	10k : CHIP	–
R087	–	100k : CHIP	100k : CHIP	–	100k : CHIP
R088	–	1.2M : CHIP	1.2M : CHIP	–	1.2M : CHIP
R089	–	100 : CHIP	100 : CHIP	–	100 : CHIP
R090	–	6.8k : CHIP	6.8k : CHIP	–	6.8k : CHIP
R091	–	1.2M : CHIP	1.2M : CHIP	–	1.2M : CHIP
R092	–	1M : CHIP	1M : CHIP	–	1M : CHIP
R093	–	2.2k : CHIP	2.2k : CHIP	–	2.2k : CHIP
R094	–	4.7k : CHIP	4.7k : CHIP	–	4.7k : CHIP
R095	–	4.7k : CHIP	4.7k : CHIP	–	4.7k : CHIP
R096	–	100 : CHIP	100 : CHIP	–	100 : CHIP
R097	–	100 : CHIP	100 : CHIP	–	100 : CHIP
R099	10k : CHIP		10k : CHIP		10k : CHIP
R501	10k : CHIP	10k : CHIP	10k : CHIP	–	10k : CHIP
R502	10k : CHIP	10k : CHIP	10k : CHIP	–	10k : CHIP
R504	1k : CHIP	1k : CHIP	1k : CHIP	–	1k : CHIP
R505	1k : CHIP	1k : CHIP	1k : CHIP	–	1k : CHIP
R507	100 : CHIP	100 : CHIP	100 : CHIP	–	100 : CHIP
R508	100 : CHIP	100 : CHIP	100 : CHIP	–	100 : CHIP
R509	15k : CHIP	15k : CHIP	15k : CHIP	–	15k : CHIP
R512	6.8k	6.8k	6.8k	–	6.8k
R514	6.8k :CHIP	6.8k :CHIP	6.8k :CHIP	–	6.8k :CHIP
R516	8.2k : CHIP	8.2k : CHIP	6.8k :CHIP	–	8.2k : CHIP
R555	1k : CHIP	1k : CHIP	1k : CHIP	–	1k : CHIP
X501	13.875MHz	13.875MHz	13.875MHz	–	13.875MHz

– : Not mounted

Schematic diagrams
← MA7(1/3) board

Schematic diagrams
MA7(2/3) board →

MA7 (2/3) BOARD IC VOLTAGE LIST

IC	Pin	Voltage	IC	Pin	Voltage
IC801	1	(2.3) <4.3>		44	(2.9) <3.4>
	3	2.5		45	4.2
	4	(1.5) <0>		46	(2.3) <2.8>
	5	(2.1) <0.3>		47	3.3
	6	(2.7) <2.1>		48	(2.3) <4.3>
	7	(2.9) <3.3>	IC802	1	GND
	8	4.5		2	2.1
	9	0.6		3	4.9
	10	3.1		4	2.0
	11	2.2		6	(0) <0.3>
	12	2.7		7	1.8
	13	2.2		8	GND
	14	0.1		9	1.8
	15	1.3		10	GND
	16	2.2		11	0
	17	2.6		12	2.3
	18	0.3		13	GND
	19	2.6		14	1.7
	20	GND		15	1.7
	21	2.6		16	4.9
	22	0.1		17	GND
	23	(4.3) <1.8>		18	4.9
	24	GND		19	0.8
	25	(0) <2.4>		20	4.9
	26	0.6		21	1.0
	27	4.0		22	0.3
	28	2.6		23	2.2
	29	2.1		24	GND
	33	4.8	IC803	1	2.6
	34	0.5		2	4.9
	35	0.2		3	0.9
	36	2.6		4	GND
	37	2.6		5	0.5
	38	(2.3) <3.1>		6	3.5
	39	1.9		7	4.9
	40	(0) <0.3>		8	1.9
	41	(1.9) <1.6>		9	4.9
	42	GND		10	0.3
	43	(3.1) <3.7>			

All voltages are in V.
Pin numbers which are not described are not used.

MA7 (2/3) BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q801	3.1	1.7	2.5
Q802	(1.7) <2.1>	4.8	(1.1) <1.5>
Q803	1.7	2.7	1.1
Q804	0.9	GND	1.6
Q805	1.6	4.8	0.8
Q806	4.8	0	GND
Q807	0	0	0
Q808	0.0	0	0
Q809	5	1.6	0.9
Q810	1.3	0	GND
Q811	0.0	0.0	GND
Q812	2.5	4.8	1.9
Q813	0.0	0	3.1
Q814	2.5	4.8	1.8
Q815	(1.7) <2.1>	4.8	(1.1) <2.1>
Q816	2.9	4.8	2.3
Q818	4.8	0	GND
Q819	0.0	0	GND
Q820	0.3	0.0	GND
Q821	1.3	4	GND
Q822	0.6	0	GND
Q824	(0.2) <2.3>	(0.6) <4.8>	(0.3) <1.7>
Q825	0	4.8	GND
Q827	0	0	GND
Q828	0.2	(1.7) <2.1>	GND
Q829	(1.7) <2.1>	GND	(1.1) <1.4>
Q830	(4.8) <0.1>	(0.6) <4.8>	4.8
Q831	(2.5) <2.8>	4.8	(1.7) <2.1>
Q832	4.8	0	0
Q833	1.9	4.8	1.3
Q834	4.8	0.3	4.8
Q835	4.8	0.3	4.8
Q836	4.8	0	0.3
Q837	2.6	4.8	1.9
Q839	4.8	GND	GND
Q840	0	0.9	GND
Q843	0	0	0
Q844	(0) <4.8>	(3.4) <0>	GND

All voltages are in V.

• MA7 (2/3) BOARD WAVEFORMS

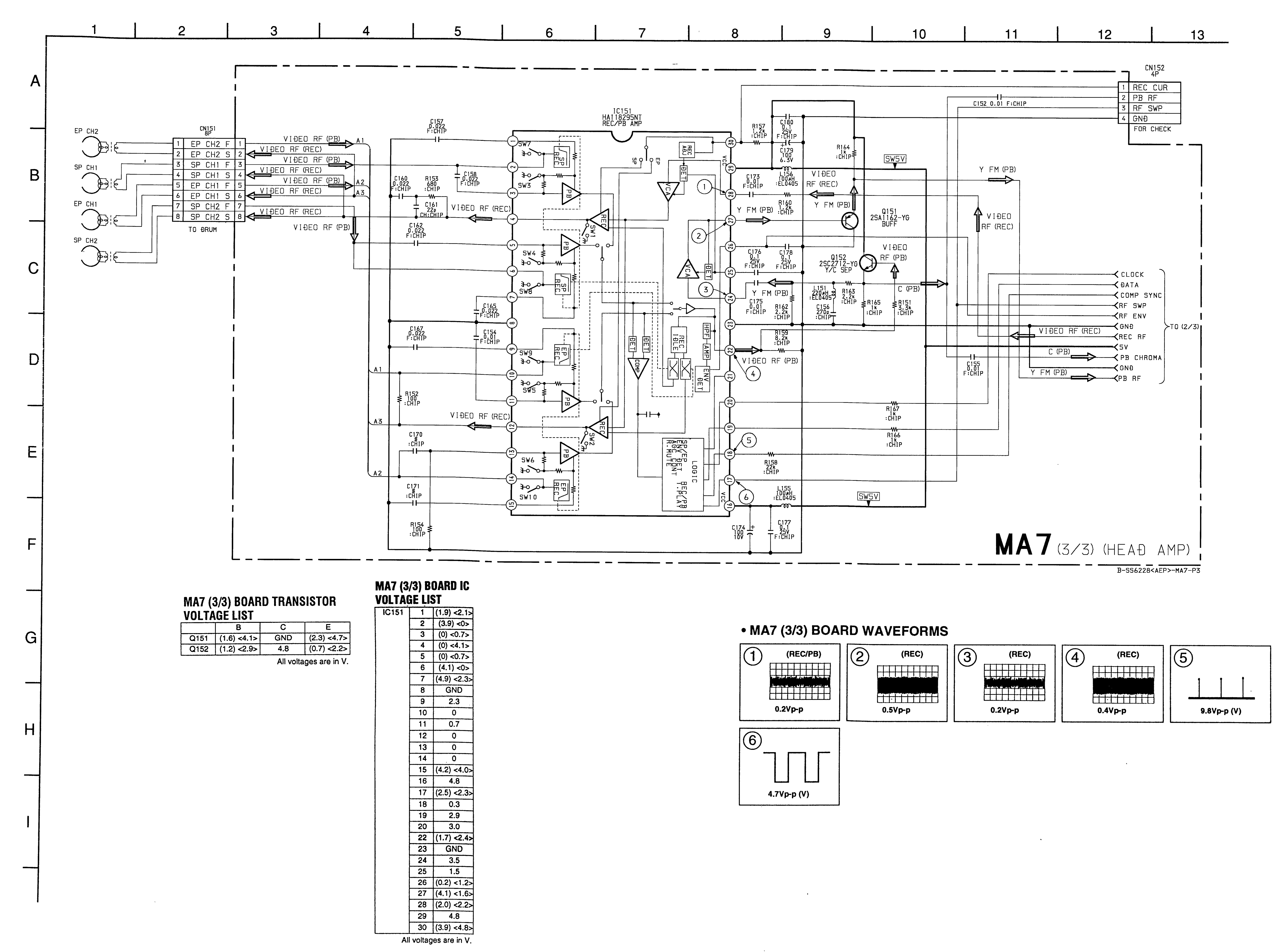
- ① (REC) PAL/SECAM — 0.5Vp-p (H)
- ① (REC) NTSC — 0.4Vp-p (H)
- ② (PB) PAL/SECAM — 0.4Vp-p (H)
- ② (PB) NTSC — 0.4Vp-p (H)
- ③ (PB) — 0.3Vp-p
- ④ (REC) — 0.5Vp-p
- ⑤ (REC) PAL/SECAM — 1.0Vp-p (H)
- ⑤ (REC) NTSC — 1.0Vp-p (H)
- ⑥ (PB) PAL/SECAM — 2.3Vp-p (H)
- ⑥ (PB) NTSC — 2.3Vp-p (H)
- ⑦ (REC) PAL/SECAM — 0.4Vp-p (H)
- ⑦ (REC) NTSC — 0.4Vp-p (H)
- ⑧ (PB) PAL/SECAM — 0.4Vp-p (H)
- ⑧ (PB) NTSC — 0.4Vp-p (H)
- ⑨ (PB) PAL/SECAM — 0.3Vp-p (H)
- ⑨ (PB) NTSC — 0.3Vp-p (H)
- ⑩ (PB) PAL/SECAM — 0.3Vp-p (H)
- ⑩ (PB) NTSC — 0.3Vp-p (H)
- ⑪ (PB) PAL/SECAM — 0.3Vp-p (H)
- ⑪ (PB) NTSC — 0.3Vp-p (H)
- ⑫ (REC) PAL/SECAM — 0.4Vp-p (H)
- ⑫ (REC) NTSC — 0.4Vp-p (H)
- ⑬ (PB) PAL/SECAM — 0.4Vp-p (H)
- ⑬ (PB) NTSC — 0.4Vp-p (H)
- ⑭ — 0.5Vp-p (1.13MHz)

MA7 (2/3) BOARD ✻ MARK LIST

	KV-14V5A/14V5E/14V6A/14V6E	KV-14V5B/14V6B	KV-14V5D/14V6D	KV-14V5K	KV-14V5U/14V6U
C809	–	1	–	–	–
C821	–	0.022 B : CHIP	–	–	–
C822	–	270p : CHIP	–	–	–
C827	–	0.0033 B : CHIP	–	–	–
C864	–	0.0047 B : CHIP	–	–	–
C877	–	0.01 B : CHIP	–	0.01 B : CHIP	–
C878	–	0.01 F : CHIP	–	0.01 F : CHIP	–
C879	–	47 6.3V	–	47 6.3V	–
C887	–	0.01 F : CHIP	–	–	–
C888	–	4.7	–	–	–
C889	–	39p CH : CHIP	–	–	–
CN801	–	17p	–	–	–
D801	–	1SS119	–	–	–
D802	–	RB441Q	–	JW (5)	–
D808	–	1SS119	–	1SS119	–
DL801	–	DELAY-LINE	–	–	–
IC803	–	LA7356M	–	LA7356M	–
L810	–	68µH : EL0405	–	–	–
L811	–	39µH : EL0405	–	–	–
L821	–	100µH : EL0405	–	100µH : EL0405	–
Q802	–	2SC2712-YG	–	–	–
Q804	–	2SA1162-YG	–	–	–
Q805	–	2SC2712-YG	–	–	–
Q809	–	2SC2712-YG	–	–	–
Q815	–	2SC2712-YG	–	–	–
Q819	–	UN2213	–	–	–
Q820	–	UN2213	–	–	–
Q822	–	UN2213	–	–	–
Q840	–	UN2213	–	–	–
Q843	–	UN2213	–	–	–
R811	–	100 : CHIP	–	–	–
R812	0 : CHIP	–	0 : CHIP	0 : CHIP	0 : CHIP
R814	–	1k : CHIP	–	–	–
R817	–	10k : CHIP	–	–	–
R818	–	10k : CHIP	–	–	–
R824	–	3.3k : CHIP	–	–	–
R825	–	2.2k : CHIP	–	–	–
R828	–	2.2k : CHIP	–	–	–
R829	–	2.2k : CHIP	–	–	–
R830	–	0 : CHIP	–	–	–
R831	–	1k : CHIP	–	–	–
R836	–	1k : CHIP	–	–	–
R839	–	100 : CHIP	–	–	–
R855	–	4.7k : CHIP	–	–	–
R893	–	0 : CHIP	–	0 : CHIP	–
R896	–	1k	–	1k	–
R899	–	6.8k : CHIP	–	6.8k : CHIP	–
R900	–	JW (12.5)	–	–	–
R901	–	2.2k : CHIP	–	2.2k : CHIP	–
R902	–	6.8k : CHIP	–	6.8k : CHIP	–
R906	–	0 : CHIP	–	–	–
R915	–	1k : CHIP	–	–	–

– : Not mounted

MA7 (2/3) (Y/C PROCESSOR)



MA7 (3/3) BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q151	(1.6) <4.1>	GND	(2.3) <4.7>
Q152	(1.2) <2.9>	4.8	(0.7) <2.2>

All voltages are in V.

MA7 (3/3) BOARD IC VOLTAGE LIST

IC151	1	(1.9) <2.1>
	2	(3.9) <0>
	3	(0) <0.7>
	4	(0) <4.1>
	5	(0) <0.7>
	6	(4.1) <0>
	7	(4.9) <2.3>
	8	GND
	9	2.3
	10	0
	11	0.7
	12	0
	13	0
	14	0
	15	(4.2) <4.0>
	16	4.8
	17	(2.5) <2.3>
	18	0.3
	19	2.9
	20	3.0
	22	(1.7) <2.4>
	23	GND
	24	3.5
	25	1.5
	26	(0.2) <1.2>
	27	(4.1) <1.6>
	28	(2.0) <2.2>
	29	4.8
	30	(3.9) <4.8>

All voltages are in V.

• MA7 (3/3) BOARD WAVEFORMS

① (REC/PB) 0.2Vp-p

② (REC) 0.5Vp-p

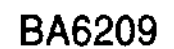
③ (REC) 0.2Vp-p

④ (REC) 0.4Vp-p

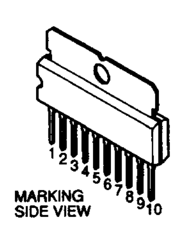
⑤ 9.8Vp-p (V)

⑥ 4.7Vp-p (V)

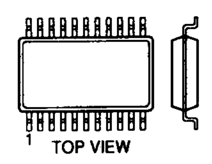
6-6. SEMICONDUCTORS



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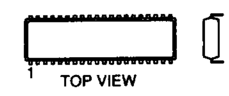


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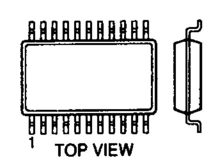
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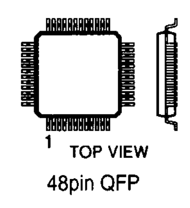
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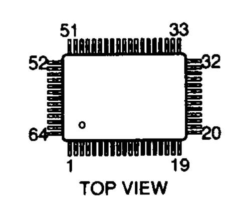
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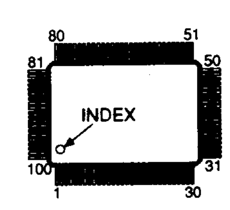


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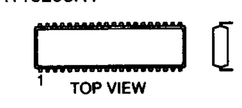
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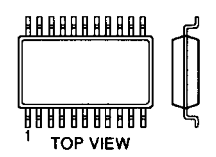


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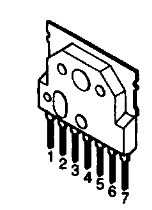
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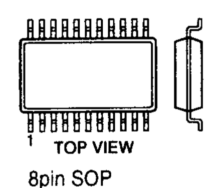


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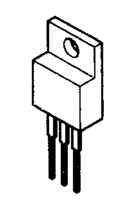


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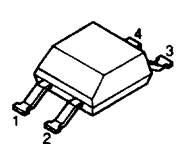


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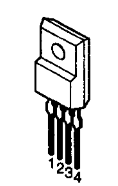
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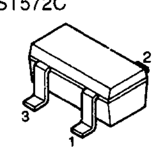
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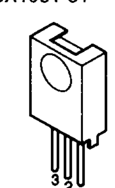
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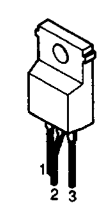
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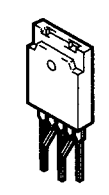
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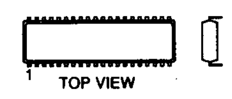
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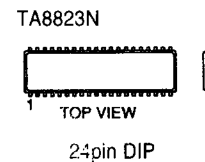


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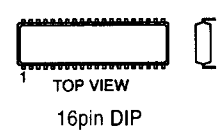
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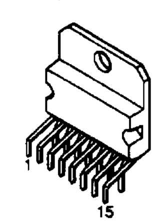
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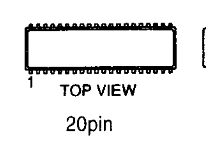


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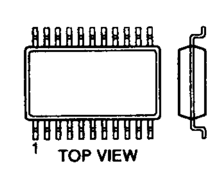


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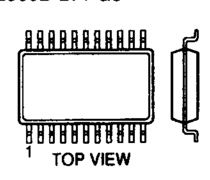
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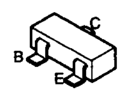
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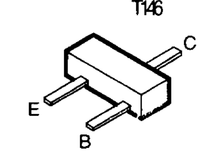


14pin

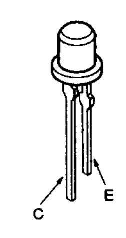
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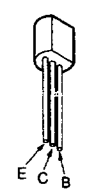
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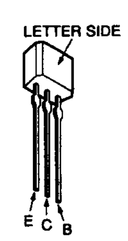
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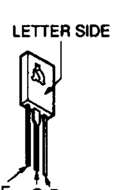
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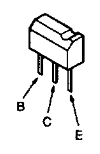
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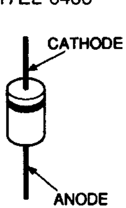
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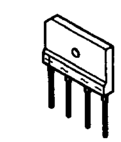
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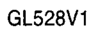


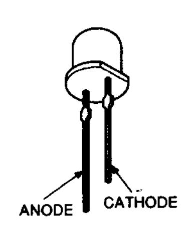
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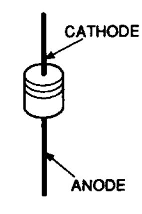

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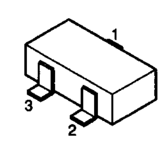

GL528V1




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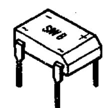
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